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| 10/008,471 | 11/09/2001 | David Hohl | LIFE059 | 9378 |

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| EXAMINER | |
|---|---|
| DOOLEY, MATTHEW C | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2133 | 2 |

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. 10/008,471 | Applicant(s) HOHL, DAVID | |
|---|---|---|---|
| | Examiner Matthew C. Dooley | Art Unit 2133 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *09 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 recites the limitation "said cyclic redundancy check circuit" in line 2 of claim 2. There is insufficient antecedent basis for this limitation in the claim. Claim 2 refers to itself instead of claim 1. For matters of examination, claim 2 will be examined as being dependent from claim 1, so as to correct the antecedent basis problem outlined above, however appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 12 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Hepler, U.S. 5,432,801.

As per claim 1:

Hepler teaches to a memory, a DMA controller coupled to said memory, a CRC check unit coupled to the DMA controller, wherein the DMA controller is configured to transfer data from the memory to the CRC unit, and wherein the CRC unit calculates at least one check value for the data (Fig.3; Col.3: 18-33).

As per claim 12:

Claim 12 is the corresponding method claim to apparatus claim 1 rejected above and as such, claim 12 is rejected under analogous reasoning to that used above in the rejection of claim 1.

As per claim 22:

Hepler teaches to a DMA controller configured to transfer a data stream from a memory to a CRC unit, and a CRC check unit wherein the CRC unit calculates at least one check value for the data stream (Fig.3; Col.3: 18-33).

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-2, 12-13, and 22-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Bernath et al., U.S. 6,629,288.

As per claim 1:

Bernath teaches to a memory, a DMA controller coupled to said memory, a CRC check unit coupled to the DMA controller, wherein the DMA controller is configured to transfer data from the memory to the CRC unit, and wherein the CRC unit calculates at least one check value for the data (Fig.1,6; Col.1: 17-25; Col.7: 55-65; Col.9: 8-29).

As per claim 2:

Bernath teaches to seeding the CRC unit with an initial value (Col.2: 42-45).

As per claim 12:

Claim 12 is the corresponding method claim to apparatus claim 1 rejected above and as such, claim 12 is rejected under analogous reasoning to that used above in the rejection of claim 1.

As per claim 13:

Claim 13 is the corresponding method claim to apparatus claim 2 rejected above and as such, claim 13 is rejected under analogous reasoning to that used above in the rejection of claim 2.

As per claim 22:

Hepler teaches to a DMA controller configured to transfer a data stream from a memory to a CRC unit, and a CRC check unit wherein the CRC unit calculates at least one check value for the data stream (Fig.3; Col.3: 18-33).

As per claim 23:

Bernath teaches to seeding the CRC unit with an initial value (Col.2: 42-45).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 3-5, 10, 14-17, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernath et al., U.S. 6,629,288, in view of MacKenna et al, U.S. 6,154,793.

As per claim 3:

Bernath does teach to management of source and destination addressing as well as configuring the size of the data stream (Col.2: 18-20; Col.3: 30-35). However, even if it is implicit that these processes are necessarily utilized by the DMA controller, it is not explicitly disclosed that the DMA controller is set up with source and destination address information as well as data size. MacKenna teaches to a DMA controller that is configured with source and destination address information as well as data stream size (Fig.3, 6; Col.5: 29-34; Col.6: 52 – Col.7: 37). It would have been obvious for one of ordinary skill in the art at the time of the invention to make use of the specified techniques disclosed by MacKenna, with regards to the set up of a DMA controller, in conjunction with the system of Bernath because it explicitly gives a framework for the managed source and destination addressing as well as configured size of the data stream to be properly utilized by the processing system of Bernath.

As per claim 4:

Bernath teaches to the transfer of the data stream by the DMA controller from memory to the CRC unit (Fig.1; Col.5: 15-18).

As per claim 5:

Bernath teaches to reading a calculated CRC value from the CRC check circuit, and to store the calculated CRC value in memory (Fig.3B, Fig.4).

As per claim 10:

Bernath and MacKenna teach to programming for seeding the CRC unit (Bernath: Col.2: 42-45), configuring a DMA controller with source and destination address

information as well as data stream size (MacKenna: Fig.3, 6; Col.5: 29-34; Col.6: 52 – Col.7: 37), and initiating the transfer of the data stream by the DMA controller to the CRC unit (Bernath: Fig.1; Col.5: 15-18).

As per claim 14:

Claim 14 is the corresponding method claim to apparatus claim 3 rejected above and as such, claim 14 is rejected under analogous reasoning to that used above in the rejection of claim 3.

As per claim 15:

Claim 15 is the corresponding method claim to apparatus claim 4 rejected above and as such, claim 15 is rejected under analogous reasoning to that used above in the rejection of claim 4.

As per claim 16:

Bernath teaches to transferring each byte in the data stream to the CRC unit by the DMA controller (Fig.1,3A; Col.4: 41-57).

As per claim 17:

Claim 17 is the corresponding method claim to apparatus claim 5 rejected above and as such, claim 17 is rejected under analogous reasoning to that used above in the rejection of claim 5.

As per claim 24:

Bernath does teach to management of source and destination addressing as well as configuring the size of the data stream (Col.2: 18-20; Col.3: 30-35). However, even if it is implicit that these processes are necessarily utilized by the DMA controller, it is not

explicitly disclosed that the DMA controller is set up with source and destination address information as well as data size. MacKenna teaches to a DMA controller that is configured with source and destination address information as well as data stream size (Fig.3, 6; Col.5: 29-34; Col.6: 52 – Col.7: 37). It would have been obvious for one of ordinary skill in the art at the time of the invention to make use of the specified techniques disclosed by MacKenna, with regards to the set up of a DMA controller, in conjunction with the system of Bernath because it explicitly gives a framework for the managed source and destination addressing as well as configured size of the data stream to be properly utilized by the processing system of Bernath.

As per claim 25:

Bernath teaches to the transfer of the data stream by the DMA controller from memory to the CRC unit (Fig.1; Col.5: 15-18).

As per claim 26:

Bernath teaches to reading a calculated CRC value from the CRC check circuit, and to store the calculated CRC value in memory (Fig.3B, Fig.4).

9. Claims 6-7, 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernath et al., U.S. 6,629,288, in view of Shay, U.S. 5,900,886.

As per claim 6:

Bernath teaches to the use of a multitude of peripheral devices useable on the peripheral bus accessed by the DMA controller (Fig.1; Col.6: 38-45). However, not specifically recited is the use of a display controller. Shay teaches to the use of a display

controller coupled to a DMA controller configured to transfer a data stream from memory to the display controller (Fig.1). It would have been obvious for one of ordinary skill in the art at the time of the invention to make use of the system of Shay in conjunction with that of Bernath because the display unit of Shay allows for the capability of displaying data for the system of Bernath.

As per claim 7:

Shay teaches to configuring the display controller with a display address for the data stream (Col.2: 55-58; Col.8: 59 – Col.9: 2).

As per claim 18:

Claim 18 is the corresponding method claim to apparatus claim 6 rejected above and as such, claim 18 is rejected under analogous reasoning to that used above in the rejection of claim 6.

As per claim 19:

Claim 19 is the corresponding method claim to apparatus claim 7 rejected above and as such, claim 19 is rejected under analogous reasoning to that used above in the rejection of claim 7.

10. Claims 8-9, 11, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernath et al., U.S. 6,629,288, in view of Shay, U.S. 5,900,886, as applied to claims 6-7, 18-19 above, and further in view of MacKenna et al, U.S. 6,154,793.

As per claim 8:

The combination of Bernath and Shay above teaches to the distribution of a display data stream from a DMA controller to a display controller. However, not taught is the fact that the DMA controller is set up with a source address, a destination address, and a size for the data stream. MacKenna teaches to a DMA controller that is configured with source and destination address information as well as data stream size (Fig.3, 6; Col.5: 29-34; Col.6: 52 – Col.7: 37). It would have been obvious for one of ordinary skill in the art at the time of the invention to make use of the specified techniques disclosed by MacKenna, with regards to the set up of a DMA controller, in conjunction with the system of Bernath and Shay because it explicitly gives a framework for the managed source and destination addressing as well as configured size of the data stream to be properly utilized by the processing system of Bernath and Shay.

As per claim 9:

Shay teaches to initiating the transfer of the data stream by the DMA controller to the display controller (Col.2: 55-58; Col.8: 59 – Col.9: 2).

As per claim 11:

Bernath, Shay and MacKenna teach to configuring the display controller with a display address for the data stream (Shay: Col.2: 55-58; Col.8: 59 – Col.9: 2), setting up a DMA controller with source and destination address information as well as data stream size (MacKenna: Fig.3, 6; Col.5: 29-34; Col.6: 52 – Col.7: 37), and initiating the transfer of the data stream by the DMA controller to the display controller (Shay: Col.2: 55-58; Col.8: 59 – Col.9: 2).

As per claim 20:

Claim 20 is the corresponding method claim to apparatus claim 8 rejected above and as such, claim 20 is rejected under analogous reasoning to that used above in the rejection of claim 8.

As per claim 21:

Claim 21 is the corresponding method claim to apparatus claim 9 rejected above and as such, claim 21 is rejected under analogous reasoning to that used above in the rejection of claim 9.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

| | | |
|---|---|---|
| a. | Cripps | U.S. 5,752,251 |
| b. | Canestaro et al. | U.S. 6,446,238 |
| c. | Guey | U.S. 6,594,793 |

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Dooley whose telephone number is (703) 306-5538. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (703) 305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Matt Dooley

Matthew Dooley
Examiner AU 2133
06/22/04

Greg J. Lamarre
for

Albert DeCady
Primary Examiner